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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/874,147	06/05/2001	Michael J. Siwinski	82686THC	6252

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EXAMINER
JORGENSEN, LELAND R

ART UNIT	PAPER NUMBER
2675	

DATE MAILED: 07/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/874,147	Applicant(s) SIWINSKI, MICHAEL J.	
	Examiner Leland R. Jorgensen	Art Unit 2675	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 June 2001* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 - 10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 - 10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2 .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1, 4 - 6, 9, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hill, Jr., USPN 5,790,096, in view of Kubes et al., USPN 6,035,180.

Claims 1 and 6

Hill teaches a color electroluminescent display, comprising a plurality of differently colored light emitting elements having different light emitting efficiencies and a digital image processing circuit [color to monochrome reduction device 21] for converting at least a portion of a color digital image to be displayed on the display to a monochrome image. Hill, Jr., col. 7, lines 7 – 40; figure 1; and table I. Hill teaches means for displaying the monochrome image using the colored light emitting elements having the highest light emitting efficiency. Specifically, Hill teaches that the red and blue frame buffers [20 and 24] are unplugged to display a monochrome image using the green frame buffer. The green light emitting elements have the highest light emitting efficiency. Hill, Jr., col. 2, line 58 – col. 3, line 8; and col. 7, lines 10 – 40.

Although Hill, Jr., notes that it supports all flat panel display types including electroluminescent displays, Hill, Jr., does not specifically teach that the color display is an organic electroluminescent display.

Kubes teaches a color organic electroluminescent display [display area 10]. Kubes, col. 2, lines 48 – 52; col. 7, line 66 – col. 8, line 41; and figure 1. Kubes teaches that organic electroluminescence have a plurality of different light emitting elements having different light emitting efficiencies. Kubes specifically teaches that one colored lighted emitting element, specifically yellow/green, has the highest light emitting efficiency. Kubes, col. 9, lines 48 – 60; col. 10, lines 28 – 32; and figure 12.

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the color organic electroluminescent elements as taught by Kubes with the color electroluminescent display as taught by Hill. Kubes invites such combination by teaching,

> In modem modular digital communication devices, such as, mobile telephones, pagers and PDAs, the external appearance and aesthetic design aspects of such devices are becoming increasingly important both from the standpoint of consumer marketing appeal as well as from the user interface point of view. Such devices are now manufactured with various bright colored plastic housings and are often decorated with designs such as flowers to increase their appeal to consumers. Certain designs of cellular telephones, for example, also offer customization features such as flip covers over the display and keypad areas which come in assorted colors as well as with artistic designs on the outer surface. In addition, various models of modular communication devices may incorporate different sizes and/or color combinations of keypads and have various sizes of display areas, typically liquid crystal displays (LCDs), depending upon the number of parameters needed to be displayed and the type of use for which the device is intended.
>
> Mobile telephones have also included numerous different types of user inputs. For example, keypads may include traditional push switches or rectangular spring biased molded plastic keys, each with or without backlighting.

> The popularity of each of these techniques for decorating the exterior of a communication device comes and goes with the decorative trends of the moment. Keypad and other user interface designs are generally fixed when a device such as a mobile telephone is manufactured and substantial expense is required in order to change the design. Moreover, with current approaches to mobile phone user interfaces and aesthetic decoration, there is very little opportunity for a user to customize the external appearance of the phone from time to time after it has been purchased and put into use.
>
> Thus, a need exists for a design by which the appearance of a communication device such as a mobile telephone, can be selectively programmed by either the manufacturer or the user in a universal fashion. That is, it would be a distinct advantage if not only the color and/or design of the exterior of the device could be selectively defined and/or periodically changed by a user, but also the actual user interface, including user input and output designs on the exterior surface of the device. The system of the present invention incorporates such advantages.

Kubes, col. 1, lines 22 – 63. Kubes specifically invites one to apply the same techniques as used for other displays.

> By way of general summary, the basic principles of operation of the organic electroluminescent display incorporated into the present invention are somewhat related to those used in liquid crystal displays (LCDs). An organic electroluminescent layer such as a light emitting polymer layer or layers (LEPs) or Alq are sandwiched between two conductive layers comprising Indium Tin Oxide (ITO) (or other suitable material) and Aluminum (Al) (or other suitable material) that are etched, usually via a laser, or stereo lithography, into conductive elongate conductive strips comprising "wires." Each of the etched "wires" on these respective areas run perpendicular to one another. At the crossing point of the "wires" between the top ITO (or other suitable material) layer and the bottom Al (or other suitable material) layer, a pixel is formed. A particular pixel is lighted by voltage when the appropriate ITO (or other suitable material) "wire" and the corresponding "Al" (or other suitable material) are combined in a circuit. The current going through the crosspoint between the two wires excites the LEP or Alq layer and light is emitted. In current technology, organic electroluminescent materials, such as LEPs and Alq have been developed that exhibit the colors green, yellow, blue and red. The color green/yellow has proven to be the most efficient color so far. The light emitting organic electroluminescent material display operates at a relatively low voltage and a reasonable current and give light levels that are comparable to both light emitting diodes (LEDs) and liquid crystal displays (LCDs).

Kubes, col. 10, lines 9 – 36.

Claims 4 and 9

Both Hill and Kubes teach that the display has red, green, and blue light emitting elements and that the green light emitting elements have the highest light emitting efficiency. Hill, Jr., col. 2, line 58 – col. 3, line 8; col. 7, lines 10 – 40. Kubes, col. 10, lines 28 – 32.

Claims 5 and 10

Hill teaches that the digital image processing circuit converts a color digital image to a monochrome digital image by combining 5/16, 9/16, and 2/16 of the red, green and blue color signals, respectively. Hill, Jr., col. 7, lines 20 – 34; and table I.

3. Claims 2 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hill, Jr., in view of Kubes et al. as applied to claims 1 or 6 above, and further in view of Shimoda, USPN 5,944,829.

Claims 2 and 7

Neither Hill, Jr., nor Kubes teach a battery and the power saving mode.

Shimoda teaches a laptop computer that is in battery powered device. It is inherent that a laptop computer have a display. Shimoda teaches a power monitor [power information module 30] for monitoring the power level of the battery 22, and a control circuit [CPU 12] connected to power monitor for converting the display [coupled through input/output device 14] to a power saving mode of operation [operating mode 26, 27, or 28] when the battery power reaches a predetermined level. Shimoda, col. 3, lines 41 – col. 4, line 42; col. 6, lines 4 – 11; and figures 1 and 3.

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the power saving mode as taught by Shimoda with the color organic electroluminescent display as taught by Hill, Jr., and Kubes. Shimoda invites such combination by teaching,

> Many modern computer systems are implemented in light weight, portable designs that enable a user to carry the computer wherever the user may travel. Such portable computers are called "laptops" or "notebooks" (hereinafter generally referred to as a laptop). Laptops typically include alternate sources of power so that the user may either plug the laptop into an electrical wall outlet or use a battery mounted within the laptop. Battery life is an important design characteristic for laptop computers since users desire a maximum amount of time to use the laptop while away from an environment affording access to an electrical outlet.

Shimoda, col. 1, lines 14 – 24. Shimoda adds,

> The present invention provides a new and improved power conservation scheme for use in connection with user applications. Generally, each user application is implemented with a power conservation software module that can include a user interface. The power conservation module stores default preferences or user designated preferences, via the user interface, regarding battery life, monitors power characteristics of the laptop, for example via communication with the APM, and operates the user application in accordance with the default or user preferences and the monitored power characteristics.

Shimoda, col. 2, lines 48 – 58. Shimoda concludes,

> In this manner, according to the present invention, information acquired by a utility such as APM is made available for use in setting actual operating characteristics of a user application in relation to the state of a battery being used to power a portable computer.

Shimoda, col. 6, lines 30 – 34.

4. Claims 3 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hill, Jr., in view of Kubes et al. as applied to claims 1 or 6 above, and further in view of Nelson et al., USPN 6,311,282 B1.

Claim 3 and 8

Neither Hill, Jr., nor Kubes teach a battery saving mode switch.

Nelson teaches a battery saving mode switch [Suspend/Resume button]. Nelson, col 1, lines 11 – 14; and col. 10, lines 12 – 16.

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the battery saving mode switch as taught by Nelson with the color organic electroluminescent display as taught by Hill, Jr., and Kubes. Nelson invites such combination by teaching,

> Portable computers are well known, as are personal "communicators" of the type exemplified by the Motorola Envoy. Such portable computing devices are invariably battery powered. Since presently available batteries have very limited storage capabilities, it is important that such portable computing devices (both computers and communicators) limit their power draw. Therefore there is known a wide range of techniques for conserving power in such battery powered devices. These power conservation methods include shutting down portions (various subsystems) of the computer when not in use, as well as putting the computer CPU (the main processor) to "sleep" when its capabilities are not being used.

Nelson, col. 1, lines 16 – 29.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Reinhardt, USPN 5,598,565, and Smith et al., USPN 5,167,024, each teach a power management system for a portable computer with display.

Yamada, USPN 6,366,025 B1, teaches an electroluminescent display noting the high efficiency of green.

Roach et al., USPN 6,560,398 B1, teaches a colored organic electroluminescent material.

Takashimizu, JP 410091088 A, teaches only green light emitting elements being displayed for a monochrome screen to save power.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leland Jorgensen whose telephone number is 703-305-2650. The examiner can normally be reached on Monday through Friday, 7:00 a.m. through 3:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven J. Saras can be reached on 703-305-9720.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office, telephone number (703) 306-0377.

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STEVEN SARAS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600